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ABSTRACT

This report, the fifth in a series of studies of South Carolina's vocational education system, summarizes the results of a recent mail survey of more than 1,200 employers throughout the state regarding their perceptions of and experiences with vocational education, its graduates, and entry-level workers. Some of the results of the survey were as follows: (1) over 31 percent of the employers said they were not getting enough qualified applicants for entry-level positions, especially in the construction industry; (2) the need for preemployment training of workers varied by industry; (3) the four worker characteristics most preferred by employers included good work habits and attitudes, interpersonal skills, specific job skills, and prior work experience; (4) although employers did not rate "basic academic skills" highly, there was serious concern about the lack of these skills in some applicants; and (5) nearly three-fourths of all respondents said they preferred to hire workers who had received vocational training over those who had not. Recommendations were made to study the potential role of vocational education for all students, to increase employability skills training, to involve employers in vocational programming and student recruitment, and to make assessment of employer satisfaction and student job placement components of vocational program evaluation. (KC)

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A STUDY OF VOCATIONAL EDUCATION

ED290923

Report #5

What Employers Say About Vocational Education In South Carolina

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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April 1986

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The Fifth in a Series of Seven Reports to the
South Carolina General Assembly

Prepared by the
State Council on Vocational and Technical Education
2221 Devine Street, Suite 420
Columbia, South Carolina 29205

Stephen Carter, Chairman
Robert H. White, Executive Director

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** Indicates Chairman of the Special Study Committee

Project Director: Dr. Angela Holweger
Administrative Assistant: Mrs. Elizabeth "Lib" Shealy
Executive Director: Dr. Robert H. White

2221 Devine Street, Suite 420
Columbia, SC 29205
(803) 758-3038

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EXECUTIVE SUMMARY

This report to the General Assembly, prepared by the State Council on Vocational and Technical Education, is the fifth in a series of reports on an 8-part study of the state's vocational education system, as mandated in the EIA of 1984. The bulk of the report summarizes the results of the Council's recent mail survey of over 1200 employers throughout South Carolina regarding their perceptions of and experiences with vocational education, its graduates, and entry-level workers in general.

The introductory sections of the report provide a **background** against which to understand and evaluate the findings of the employer survey. These sections outline the purposes and potential benefits of periodic employer assessments, describe briefly the debate regarding specific versus generic skills training, and summarize the results obtained from similar employer studies at national and state levels.

The general overview of **current issues and previous findings** revealed that in some industries, more specialized job skills will be needed in order for employees to function in an increasingly automated and economically competitive society. In other industries, a sound background in academic basics and competence in generic transferable skills is believed to be essential for enhancing worker adaptability to meet changing industrial needs. While most employers are generally satisfied with vocationally trained workers, and often prefer them over graduates who have completed a general curriculum, they are increasingly concerned about several employment issues.

Recent national studies and statewide surveys of employers indicate a significant shift in what employers say they want and expect in entry-level workers. Although specific job skills are still important, an increasing number of studies have found that basic skills and positive work habits and behaviors are the entry-level worker characteristics most sought by employers. This shift appears to be the result of several social and economic factors: a reordering of social values away from the traditional work ethic, economic changes and technological improvements that demand greater flexibility in the deployment of the workforce, and the increasing need and capability of employers to provide on-the-job training. A growing number of employers indicate they are willing to do their own job-specific training, but they expect secondary programs to focus on the "basics" that will enable employees to benefit from this training.

In terms of perceptions of needed improvements, several areas seem to emerge consistently. Employers feel vocational programs should develop closer ties to local industries, place increased emphasis on the mastery of basic academic subjects

(reading, writing, math), provide students with a core of transferable occupational skills, and provide more supervised work experience while students are in training.

In order to identify practices and concerns unique to South Carolina, a representative sample of employers was surveyed by the State Council in late 1985. **Results of the mail questionnaire** revealed that:

* Among the 1245 employers who responded from various industries, slightly over 31 percent said they were not getting enough qualified applicants for entry-level positions. Applicant shortages were most acute in the construction industry (building, masonry, etc.).

* Over 60 percent of the respondents who hired bank tellers, sales clerks, some types of production/assembly workers, and customer-oriented service workers (food, beverage, hotel, janitorial) said these employees typically require OJT only. Pre-employment occupational training appeared to be most important in construction (skilled jobs), finance, insurance, transportation (drivers), and mechanical service/repair, industries which also provide some additional OJT. Workers employed in client service occupations (health, social services) and in secretarial fields were expected to need little additional OJT.

* The four worker characteristics most preferred by employers included: good work habits and attitudes, interpersonal skills, specific job skills, and prior work experience. Contrary to several recent studies, "basic academic skills" was rated relatively low. However, employer comments and other ratings indicated that deficits in reading comprehension, writing, oral communications, math, reasoning, and problem-solving were a serious concern, particularly in more service-oriented and technical occupations.

* Nearly three fourths of all respondents said they preferred to hire workers who had received vocational training over those who had not. Nearly one half of the employers surveyed said they benefited directly from secondary vocational programs, usually because vocational graduates performed well and required less additional training. Another one fourth of the respondents said they had little experience with vocational programs because they hired few employees, or required an advanced degree for most positions. The remaining one fourth said they failed to benefit from vocational programs due to lack of knowledge about programs, the lack of appropriately trained workers, or dissatisfaction with those interviewed or hired. Employers in the manufacturing sector, and those employing a large workforce (over 50) benefited most frequently.

* One half to three fourths of all respondents said they <u>did not</u> provide input on the content of vocational courses, participate in recruitment opportunities, use vocational resources (faculty, facilities) to assist with company training, provide co-operative work sites, or communicate their needs to vocational staff. On the other hand, three fourths or more of the employers surveyed <u>were</u> knowledgeable about vocational course offerings, wanted to have a say in vocational course content, and encouraged advanced training for employees. Involvement with vocational programs was greatest among large employers, and generally higher in manufacturing and agriculture industries and in the Pee Dee area of the state.

* Nearly all (90%) of the respondents said that "encouraging the development of good work habits such as dependability and job commitment" should be a priority role for vocational education. Providing job specific training for non-college bound students, and teaching the application of basic academic skills in various occupations were also identified as important purposes.

* According to the employers surveyed, the most relevant accountability measure for vocational programs should be the satisfaction of employers who hire vocationally trained workers. Training-related placement rates, and program responsiveness to local needs were also rated as important measures of vocational program effectiveness.

* When asked how vocational programs could better serve their needs, employer responses were consistent with other ratings. The majority of employers cited instruction in and role modeling of positive work habits and attitudes, the development or expansion of specific programs, closer ties to business and industry, and more emphasis on basic skills as ways in which their needs could be better met.

* Industry developments that are expected to have the greatest impact on training needs included "computers" (application, not necessarily programming or repair), automated production equipment, and electronics. In service industries, many employers cited the growing need for good communication and customer relations skills.

Based on the survey findings, as well as the outcome of the recent statewide industry-education forums conducted by the Governor's Office, the Council proposed the following **recommendations.**

1) The potential role of vocational education in providing pre-employment training for ALL high school students should be explored. This training should extend beyond mere exposure to vocational fields, and include instruction in job application and interviewing, employer expectations, etc.

2) Employability skills training (good work habits, cognitive and interpersonal development, job seeking, understanding of the free enterprise system, career awareness) should be made a systematic part of the vocational curriculum.

3) Employer involvement and participation should be increased in the areas of vocational programming, recruitment of students into high demand areas, the development of co-operative education programs, and the regular assessment of labor needs and job requirements. Active advisory councils and informal personal contacts with employers (especially small businesses) should be stressed as important program components.

4) Assessment of employer satisfaction and evidence of local labor market impact should be made part of the program evaluation process, particularly as alternative assessment criteria for programs in which "training-related" placement is less appropriate (i.e., occupations requiring less specific job skills and more generic employability skills).

5) The wide variation in skills and aptitudes required in different industries and occupations should be more clearly identified in order to meet the labor market needs of the private sector and better prepare students for the employment arena.

6) Employability skills training and co-operative education should be emphasized for those industries and occupations in which specific pre-employment training is less critical (e.g., certain service occupations, retail trade, small businesses, etc.).

7) Vocational education should undertake an employer-oriented promotional strategy designed to increase awareness about programs, the specific competencies students can be expected to possess, and the ability of vocational programs to meet employer needs.

8) All occupational programs should focus attention on relevant technological developments such as the introduction of automated equipment, electronics, and computers, as well as the interpersonal and cognitive skills that employers say are preferred when hiring workers in various fields.

9) State government must support efforts to maintain and in some cases increase the flexibility needed by vocational programs to meet industry needs, whether the need is for specific job skills or more generic employability skills training. Supporting the development of various alternatives for needs assessment, program design, training delivery, and program evaluation is critical to retaining vocational education's "adaptability" for the future.

BACKGROUND

The South Carolina Council on Vocational and Technical Education is a 13-member board appointed by the Governor to meet the federal requirements of the Carl D. Perkins Vocational Education Act (P.L. 98-524). The majority of the members of the Council represent the private sector. The Council operates as a state agency, with a small staff, and is funded by a federal allocation and a state appropriation. The State Council has responsibility for evaluating and making policy recommendations to the vocational and technical education systems, as well as the Job Training Partnership Act (JTPA) program. Compliance with these duties is required to ensure the state's eligibility to receive federal funds for vocational education.

The Education Improvement Act of 1984 (Subdivision A, SubPart 5, Section 2) directed the State Council on Vocational and Technical Education to conduct an intensive study of how the state's vocational education system can best prepare young people with skills employers will require between the years 1990 and 2000. The intent of the study was to provide information that will assist the General Assembly and the Governor in reviewing vocational education in Grades 9 through 12, as part of a statewide re-assessment of job training efforts.

For the purpose of this and subsequent reports, the term "vocational education" is defined in South Carolina as an instructional program designed to provide high school students with occupational skills needed for paid or unpaid employment, or for additional preparation for a career field. Vocational programs fall into six major occupational fields and several non-occupational fields. The occupational fields include: Agriculture, Marketing, Health Occupations, Occupational Home Economics, Business Education, and Trade and Industry. Programs considered non-occupational include Consumer and Homemaking Education, Prevocational, Industrial Arts, and Personal Typing/Notehand courses.

Although the stated purpose of the study was to project future job markets and skills, and recommend ways in which the vocational education system can best meet these needs, the wording of the Act specified eight (8) key elements about which information was requested:

1 - ENROLLMENT PATTERNS: data on and analysis of students' use of the vocational education system;

2 - INFORMATION MANAGEMENT: recommendations for the creation of a new management information system that would provide more timely, accurate, and useful information on vocational enrollments, completions, and placements;

3 - STUDENT CHARACTERISTICS: a demographic and achievement profile of vocational students;

4 - EMPLOYER PERCEPTIONS: a report of employers' expectations of and experiences with the vocational education system;

5 - STUDENT PERCEPTIONS: a report of students' perceptions of and experiences with the vocational education system;

6 - NEEDS OF LOW ACHIEVERS: recommendations for how the vocational system can best meet the training and employment needs of low achievers;

7 - IMPROVED COORDINATION: recommendations for how the programs of the vocational education system can be better coordinated with other education, training, and employment agencies; and

8 - LABOR PROJECTIONS: a report on the state's labor needs for the coming decade that can be met by vocational program graduates.

Only the last element, labor projections, addressed the original charge in the legislation. Therefore, it was the Council's understanding that the eight specified elements of the study constituted a framework for collecting information which could then serve as a basis for more comprehensive recommendations. For this reason, the overall approach taken in the study was one of meeting the requirements of each element, even though, collectively, they might surpass the general charge. The Council's intent is to provide objective, descriptive information and constructive recommendations, not to evaluate the vocational education system.

Reports are issued serially, as each element of the study is completed, with an overall completion date of April, 1986. Each report includes both a detailed description of study activities and findings, and a brief summary. A final report will highlight the combined findings from all study elements, followed by a set of comprehensive recommendations.

This report to the General Assembly focuses on study element #4 - EMPLOYERS' PERCEPTIONS OF AND EXPERIENCES WITH THE VOCATIONAL EDUCATION SYSTEM. The bulk of the report summarizes the findings from a mail questionnaire completed by over 1200 employers across the state in December of 1985. A preliminary section summarizes the results obtained from similar national and state-level studies of employers. The remaining sections describe the purpose, methods, and results of the State Council's study of South Carolina employers, followed by a series of overall conclusions and recommendations for improving business-industry-education relationships and enhancing the ability of vocational programs to meet industry needs.

INTRODUCTION

The importance of assessing employers' perceptions of and experiences with vocational education cannot be overemphasized. In a way, it is much like assessing consumer satisfaction with products. The "products" of vocational education are knowledgeable and skilled workers who will contribute to the productivity, efficiency, and profits of business and industry and the economic well-being of the state. In order for vocational education to determine how well it is serving the community, to better "market" their products, and to make improvements, periodic assessments of employer opinions and perceptions are necessary.

In vocational education, these assessments are typically made through employer follow-up or satisfaction questionnaires, business and industry forums, public meetings, or special evaluation studies. They may be carried out by State Offices of Vocational Education, State Councils, national research centers, or by independent groups. Assessment methods range from formal techniques such as mail surveys of employers, personal and telephone interviews with business leaders, and structured discussion groups and forums, to informal feedback sessions during advisory committee meetings or trade conferences.

In addition to assessing employer satisfaction with the adequacy of training and preparation, and the actual job performance of vocational graduates, many studies have asked employers to evaluate the adequacy of a specific curriculum, or to make comparisons between vocationally trained employees and those who have not had such training. The specific expectations of employers regarding job applicants, business hiring and promotional practices, preferred worker characteristics and skills, and employer opinions about the strengths and weaknesses of vocational programs have also yielded useful information.

Assessing employer perceptions and involving them in the evaluation of vocational programs can provide several key benefits:

* Employer opinions can be an effective means of setting priorities for program improvement.
* Employer feedback can assist vocational educators in remaining current with labor needs, technological changes, and business procedures.
* Information on job content, hiring practices, and skill requirements can be very helpful for student guidance and job counseling purposes.
* Seeking employer input often results in improved relations between vocational programs and local business/industry, and heightens interest in vocational education.

The assessment of business/industry opinions can also reveal discrepancies between public and private sectors regarding the adequacy of preparation of graduates for employment. This problem was evidenced in a study by the Center for Public Resources of over 2,000 corporations and 400 school systems. While the corporations noted significant student deficiencies (especially in reading, math, and science), 75 percent of the schools reported their graduates as adequately prepared in these areas. Such "mis-matches" in perception often go undetected unless periodic assessments of employers' views are made.

Increased Importance of Employer Input

Significant shifts in the nation's economy and the composition of its labor force have made employer feedback more important than ever before. Dramatic changes are occurring in the workplace as the economy shifts from manufacturing and farming to high technology and information management. Employers' perceptions of the impact of these changes on labor market needs are critical to ensuring the relevance of training programs. For example, the rapid introduction of technology and the increased emphasis on productivity are altering the skills and characteristics needed by entry-level workers (see State Council Report #4: "Meeting Labor Needs in South Carolina").

Focus of the Report

As a background against which to compare the results of the employer survey conducted by the State Council, the following section reviews briefly the findings from a variety of national or state-level surveys and forums on employer perceptions. The emphasis is on four related topics: business/industry views on the role of vocational education, what employers say they want and need in entry-level workers, employer satisfaction with vocationally trained graduates, and private sector suggestions about needed improvements in the vocational education system.

Also included in the following section is a summary of the comments made at the business-industry-education forums which were held in late 1985 in four major cities across South Carolina. These comments provide an excellent opportunity to compare the results of feedback obtained through open discussions with that obtained from a formal survey.

EMPLOYER PERCEPTIONS: AN OVERVIEW OF PREVIOUS FINDINGS

THE ROLE OF VOCATIONAL EDUCATION

The irreversible demographic and economic changes occurring in the nation, coupled with rapid technological improvements and occupational developments, are affecting the nature and content of many jobs, the skill training needed by entry-level and experienced workers, and general views about the appropriate role of various occupational training programs. While most people agree that these changes are inevitable, there is some disagreement about how training programs can best respond to these developments.

Some educators and employers believe the current social and economic changes will increase work specialization and the demand for more highly specialized job skills. In their view, vocational education should move quickly to develop training and re-training programs that are closely tied to local industry needs.

On the other hand, a growing number of people claim that the current economic conditions and technological changes will require higher levels of basic academic skills (reading, writing, math, science), an improved work ethic, and greater worker adaptability. These employers and educators argue that the appropriate role of vocational education is to develop a sound academic base, transferable occupational skills, "employability" skills, and positive attitudes toward work and lifelong learning.

The Argument for Specific Skills Training

Those who argue for a "specific skills" emphasis in vocational education point out that the traditional purpose of vocational programs has been to provide job skills training. These proponents believe that the nation's overall economic performance can be best enhanced by linking job-specific skills to employers' needs or production processes through more customized vocational training.

Support for this position comes from both employers and educators. A broad-based survey of over 5,000 respondents in seven states[1] found that the greatest percentage of respondents ranked the goals of secondary vocational education in the following order of importance:

1. provide skills needed to obtain a job
2. create awareness of various occupations
3. provide an opportunity to explore various jobs
4. place students in training-related jobs

Additional support for specificity comes from the American Society for Training and Development which reports that companies are spending $20-30 billion annually for employee training. The ASTD has stated that in order to help reduce these costs, occupational education should be determined more closely by the training specifications of employers.

The Argument for General and Basic Skills Training

By contrast, a growing number of employers and educators believe that while vocational education should provide for the development of specific skills in some areas, the emphasis should be on basic or core skills achievement. This argument calls for better integration of vocational education with general education and a re-focusing on the development of basic academic skills, preparation in broad occupational areas (rather than specific jobs), and the teaching and role modeling of "employability" skills. In short, vocational education should focus on preparing youth for a life time of work in a dynamic economy where multiple career changes may be necessary.

Recent years have seen a growing amount of support for this position. In its much-publicized report on private concerns about public education, the Committee for Economic Development[2] asserted that business in general is neither interested in, nor best served by, narrow vocationalism. This conclusion was based on an in-depth assessment of the employment needs of nearly 1,000 small and large companies.[3] Survey results confirmed that specific occupational skills were viewed as less critical for entry-level employment than a generally high level of literacy, responsible job behavior and attitudes toward work, the ability to communicate well, and the ability to continue to learn.

Similar results were obtained in two other large-scale studies of employers' perceptions. A recent survey of nearly 800 manufacturers[4] found that many of the respondents view students' mastery of reading, writing, and computational skills as unsatisfactory. Over 60 percent of the respondents stressed "teaching of basics" as the most important improvement that could be made by secondary vocational programs. A study of executives in high technology[5] reported that these business people believe schools are not doing a particularly good job in preparing students in basic subject areas. Again, what these employers seem to want first is students who have a solid grounding in reading, math, science, problem-solving, and critical thinking.

Many supporters of this position feel that the teaching of core, transferable skills and knowledge increases a student's flexibility and reduces the need for on-the-job training. Some have further proposed that job specific training be reserved for postsecondary programs and employers.

Needed: A Clarification of Roles

Debate over the appropriate focus for vocational education is often clouded by what some employers see as a lack of distinction between the roles and purposes of secondary and postsecondary education. While some duplication is desirable and necessary, employers feel that shrinking resources and increased training demands call for better coordination among the various educational systems.

With the growth and accessibility of two-year technical schools, high school has become less of a "terminal" educational program than it once was. A growing percentage of high school graduates are going directly into two-year postsecondary programs, or combining employment with a postsecondary education. For this reason, many employers have recommended that the purposes of secondary and postsecondary training be clarified, that duplication be avoided where possible, and that articulation agreements for credit and advanced placements be encouraged.

Proponents of this position believe secondary and postsecondary levels of vocational education should address different national priorities and employer needs. At the national level, they feel secondary vocational programs can best address longer-term educational needs such as providing career exploration and counseling, training for "employability," ensuring equity and access, and providing a practical arena for teaching academic basics such as reading and math.

The role of postsecondary technical training, on the other hand, would focus on more immediate labor needs. Problems and needs associated with displaced workers, high technology, business start-up training and employee retraining, skill upgrading, and critical skill shortages are seen as top priorities for two-year technical colleges.

In this scheme, some job skills training would still occur at the secondary level. However, preparation in an occupational area would be more broad-based, rather than employer- or equipment-specific. These transferable occupational skills would be paralleled by an emphasis on career exploration, basic academic competence, and the development of positive work habits and attitudes.

EMPLOYER NEEDS AND EXPECTATIONS

One of the main concerns expressed by employers today is the quality of workers entering the job market out of high school. The Committee for Economic Development, in its 1985 report,[2] stated that employers believe high schools are graduating too many students who lack the basic academic skills and responsible work habits they need to succeed in the job market or in college. Among the Committee's findings:

* Employers no longer assume that young people graduate from high school adequately prepared to read, write, reason, calculate, communicate, or accept responsibility.

* An alarming number of high school graduates cannot meet entry-level job requirements. Too large a percent are unemployable at current wage rates because their skills and work habits are below the level needed for productivity.

* Minimum skills are not sufficient for job advancement.

* Employers put high value on learning ability and problem-solving skills, but they do not think schools are doing a good job of developing these much-needed abilities.

While these findings relate to public education in general, similar results are found in studies of employer perceptions of vocational graduates as well. In fact, an increasing number of employers regard basic academic skills, general occupational aptitudes, and a strong work ethic as essential to job success in any entry-level position. They usually prefer to develop job skills informally, through on-the-job training, but they expect the schools to inculcate employability skills.(6)

A recent study of employers' views on changing jobs skills in Virginia(7) summed up what employers have been reporting in the past few years. Across all occupational areas, most employers need and want workers who can:

* read, understand, and apply technical materials;
* express themselves clearly in speaking and writing;
* think clearly, logically, and creatively in order to apply their knowledge as broadly as possible;
* apply their skills to using a computer;
* present themselves as friendly, concerned, and well-informed employees.

EMPLOYER SATISFACTION

Although no longer required by federal legislation, surveys of employer satisfaction have been a part of vocational education's program evaluation process for some time. Evidence accumulated over the past ten years indicates that vocational education meets, reasonably well, its previously mandated evaluation criteria: the majority of employers surveyed in various states were "satisfied" with vocationally trained graduates.

But perhaps one of the reasons why employer assessments are no longer required by law is that after studying the impact of employer satisfaction requirements, the National Institute of Education[8] concluded that the data collected by states often lacked reliability and validity. These conclusions were based on several key findings: low response rates to mail surveys, biased sampling because students identified the employers to be surveyed, confusion over terms used such as "prepared for employment" and "well trained," lack of employer awareness about which workers had completed vocational training, and biased responding because employers didn't know how the results would be used. For these reasons, the NIE report cautioned against using employer satisfaction data to automatically trigger program decisions.

While the utility of employer satisfaction data collected for state-level accountability purposes may be questionable, several national studies have shown that employers are satisfied with the performance of vocational graduates and prefer them as workers over those who have not had such training. In 1980, for example, the U.S. Chamber of Commerce surveyed a national sample of personnel directors.[9] An overwhelming 78 percent of them said that specific occupational preparation made workers more employable. A study of nearly 800 manufacturers, conducted jointly by the National Association of Manufacturers and the National Center for Research in Vocational Education,[4] found that:

* Over 50 percent of the respondents said their company benefited from vocational education -- it lowered their training costs because vocational graduates required less on-the-job training.

* Large companies tended to be more involved and more satisfied with vocational education than small companies.

* Companies that were involved in joint activities with vocational education rated its effectiveness higher than those companies who were not involved.

* Of several possible forms of collaboration between vocational education and manufacturers, providing work experience for students was most preferred.

What States Have Found

During the time that follow-up assessment of the performance of vocational graduates was a federal requirement, many states conducted and published the results of their employer satisfaction surveys. In preparation of this report, nearly 20 of these publications were reviewed and summarized. Highlighted below is a cross-section of typical results from studies of employers.

Georgia: On a 5-point evaluation scale, the 318 employers surveyed gave vocational graduates an overall rating of 3.9. The lowest average ratings were given for technical knowledge (2.6), while the highest ratings (4.6) were given for general job preparation. Work attitude and work quality also received fairly high ratings.[10]

Texas: Asked 1,140 employers about the importance of various worker characteristics and suggestions for improvement in the vocational education system. Nearly 80 percent said applicants who have occupational skills in addition to basic academic skills start at higher pay, for at least some jobs. Nearly 40 percent said occupational skills were required for most or all entry-level jobs. Areas identified as most in need of improvement included: ability to write and speak effectively, work habits, concern for productivity, dependability, and the ability to read and apply technical material needed on the job.[11]

North Carolina: Surveyed 1500 participants (employers, educators, the general public) at concurrent forums. Found that 60 percent of the respondents felt vocational skills training in the public schools was meeting the needs of business and industry. They also felt the training being offered provided generally useful skills, but the skill requirements of business/industry were not being met fully, particularly in new industries.[12]

South Carolina: Conducted a mail survey of over 1,000 employers across the state. Found that employers considered both the vocational centers and technical colleges to be good sources of trained employees. Most employers felt vocational and technical programs were oriented more to manufacturing than to other industries.[13]

Ohio: Over 60 percent of the 250 employers surveyed by mail reported a favorable experience with vocational education graduates. Dependability and responsibility were the most important worker traits, and about 75 percent felt vocational students needed more practical experience. Small firms had a less favorable attitude toward vocational education than large firms, and employers who did not hire vocational graduates at all tended to feel they were poorly trained and that OJT was more effective than vocational education.[14]

The diversity across states with regard to the kinds of questions asked, the number and characteristics of those surveyed, and the specific opinions expressed by employers is reflected in studies conducted by Michigan,[15] New York,[16] Pennsylvania,[17,18] Ohio,[19,20] North Dakota,[21] Washington,[22] California,[6]

Arizona,[23] Illinois,[24] and Mississippi.[25] With some exceptions, the majority of these studies show that vocational graduates are rated higher than other entry-level employees on a number of dimensions. However, most employers are less satisfied with the "employability" (e.g., basic literacy, work habits and attitudes, interview skills, etc.) of graduates entering the labor force.

EMPLOYERS' PERCEPTIONS OF NEEDED IMPROVEMENTS

In addition to assessing employers' needs and levels of satisfaction with the performance of vocational graduates, many states have asked their business communities to identify specific areas in need of improvement. Frequent suggestions from employers indicate the need for:

* more communication and closer collaboration between business-industry-education;
* a re-emphasis on basic academic skills such as reading and math;
* identification of, and instruction in a common core of "transferable" job skills;
* an improved image for vocational education;
* more supervised work experience for students.

Communication and Collaboration

Three areas of collaboration often identified as being beneficial for both employers and educators are: 1) facilitating the school-to-work transition; 2) providing teacher upgrading; and 3) achieving a better match between skills taught and skills needed.

Collaboration for the purposes of achieving a smoother transition to work have resulted in a variety of programs such as cooperative education, work-study, customized job training and re-training, and industry education. Employers have suggested the continued expansion of such programs as one important area for improvement. School credit for occupational training provided at the work place, the use of industry equipment for hands-on training, and vocational incentive grants from employers have all been proposed as ways to increase collaboration.

There seems to be general support among employers for periodic vocational teacher "internships" in business and industry as a means of keeping teachers current with the technology of their occupational areas. Many feel this would enhance the teacher's credibility with students by having "been there."

Employers have also stressed the importance of communication between the business community and the schools to make their needs known to each other. Active advisory councils, site visits to industry, work fairs, periodic employer needs surveys, and industry speakers for classes have been suggested as ways to improve lines of communication.

Unfortunately, close communication between educators and employers regarding training needs does not always occur with the frequency or benefits one would expect. For example, the Virginia study[7] asked employers in eight major occupational areas to describe the level and outcome of their communications with educators. About half of the 115 companies interviewed said they had never talked with educators about their training needs. The reasons given were that they felt satisfied with the skills and characteristics of the graduates they had employed, were unaware of opportunities to communicate their needs, or perceived educators as unrealistic or unresponsive. Of those who had communicated with educators, the majority considered the contact a success. Most of these successful contacts were through on-site visits or co-operative education programs, not through committees or advisory councils.

Mastery of Basic Skills

"Basic skills" means different things to different people. To most educators, basic skills refers to core academic subject areas (English, math, science) that can be measured by standardized achievement tests. Most employers include in their definition core job competencies (typing, using tools, making change, etc.) and basic life skills such as reasoning, decision-making, and self-discipline. For the purposes of subsequent discussions, "basic academic skills" refers to reading, writing, and math, while "core job competencies" refers to transferable occupational skills and work habits. The term "job-specific skills" refers to those skills that are unique to a given job or occupation.

While most educators and employers would agree that basic academic skill deficits among high school students is a growing concern, there are varying opinions about when and where remediation should occur. Many employers feel that mastery of the academic basics must occur prior to entry into vocational education programs. Others feel that students must have access to vocational programs regardless of their skill levels, and that vocational education can be an effective instructional setting for teaching academics in an occupationally-relevant context. In fact, the integration of basic academic skills into occupational training (e.g., teaching math in the context of reading a construction blueprint) has been suggested as a way to improve student motivation to acquire competence in reading, writing, and math. The

"bottom line," however, is that business and industry expectations regarding basic academic skills are just as high for vocational students as they are for academic students.

In general, nearly all employers and educators agree that the problem of inadequate academic basic skills must be attacked much sooner, in the early school grades, and that "stop gap" remediation is not a long-term solution. Also, business and industry must be involved in the identification of basic skill requirements.

A Common Core of Transferable Job Skills

A position frequently voiced among employers is the need for a common core of skills applicable to a cluster of occupations. There are differences of opinion, however, about where and when the specialization should take place. Some employers advocate the cluster approach in Grades 9 and 10, with specialization in Grades 11 and 12. Others feel that specialization should take place at the postsecondary level, and still others feel it should occur on the job.

These differences in opinion are undoubtedly affected by requirements and hiring practices in various occupations -- the cluster concept is not appropriate for all occupations. In construction trades, for example, it would be very difficult to hire instructors with the necessary broad-based skills in the many specialties included (e.g., electricity, plumbing, carpentry, masonry, etc.).

Employers also have different notions about what is considered a "transferable" skill. For some, core job skills are much like "common sense": how to apply what is read in a manual, how to analyze situations, and how to solve everyday problems in the work setting. Others include skills necessary for getting and keeping a job: work readiness and the work ethic, quality performance, understanding business objectives, computer literacy, family and budget management, job interviewing, adaptability, and career motivation. These are considered "core" skills because they are common to all jobs.

Another core concept frequently advocated by business and industry is the idea of better integration of basic academic skills and occupational skill development. Employers feel this gives students the flexibility to pursue higher education, entry-level employment, or additional occupational training after graduation.

Improved Image

Many employers cite the inability of vocational programs to attract the brighter, more capable students as a major area needing attention. The negative image of vocational education held by many parents, students, and educators is perceived to be a barrier to participation by many students who could benefit from

vocational education. Employers are concerned that vocational education is not considered by many as having equal status to college preparation, and that vocational programs are often a "dumping ground" for less able students. Many feel that the lack of clarity regarding the purposes and benefits of vocational education can cloud student decisions to enroll.

Suggestions for improving student perceptions and interest usually focus on early and routine exposure to occupational exploration and to successful graduates of vocational programs ("models"). Employers feel the image of vocational education can also be enhanced by providing information about vocational programs to parents, providing in-service education for guidance counselors (work experience and career information), making career education and prevocational courses available prior to high school (middle school and junior high), and for eliminating the practice of "socially promoting" students who fail to achieve vocational competence.

Need for Supervised Work-Education Experience

A common complaint expressed by employers is that vocational programs fail to provide adequate "real work" opportunities. In general, employers agree on three points regarding work experience: 1) some type of work experience for all vocational students is desirable, 2) coordination between vocational programs and business/-industry at the state and local levels is a necessity, and 3) close articulation between the in-school educational experience and on-the-job experience is needed.

Frequent suggestions from employers are to make work experience mandatory, to give grades and credit for work-related experiences, and to provide financial incentives for students who participate. The problem of availability of work stations, especially in rural areas, has not been overlooked. Employers have suggested a number of ways of dealing with this special problem (e.g., rotational system, bringing industry people into the classroom, group work projects, etc.).

SOUTH CAROLINA BUSINESS-INDUSTRY-EDUCATION FORUMS

In order to get input from business and industry regarding areas of needed improvement in various training programs (vocational, technical, adult, job training), the Governor's Division of Education recently held public forums in four major areas of the state. These forums on "Occupational Training and Economic Development" were attended by over 1,000 representatives of business, industry, education, labor, economic development, and government. A summary of suggestions and ideas expressed during discussion periods that are most relevant to vocational education includes:

* **Career Counseling** - Provide more vocational counseling and career exploration, and make these services available much earlier (middle school); require pre-vocational assessment and set entry standards for enrollment in vocational programs; limit the "paperwork" duties of vocational counselors so they will have time to counsel students; upgrade the competence of counselors.

* **Basic Skills** - Place much more emphasis on basic skills such as reading, writing, math, and communication skills.

* **Equipment** - Upgrade and update the equipment used for training to be more in line with what is currently being used in business and industry.

* **Work Ethic** - Put more emphasis on the work ethic, including job attitudes, interpersonal relations, proper work habits.

* **Articulation** - Improve the articulation between secondary and postsecondary vocational training to ensure advanced credit and placement, an uninterrupted flow of study, and joint planning of programs.

* **Linkages** - Develop improved systems of communication between education and the business/industry community; encourage greater private sector participation in vocational programming; expand co-operative education; conduct better employer needs assessments.

* **Image** - Upgrade the image of vocational education among parents, students, and the general public; stop using vocational education as a "dumping ground" for less able students.

* **Access** - Improve access to, and potential for success in vocational education programs for special populations by developing extra help programs, encouraging more women, and targeting potential dropouts.

* **Programming** - Institute competency-based curricula in all programs; organize courses by skills rather than age; increase flexibility in terms of locations and times for courses; stress entrepreneurial skills.

* **Instructors** - Provide more opportunities for business/industry training of vocational instructors and counselors.

These summary comments are particularly interesting for two reasons. First, they echo the results of many other state-wide assessments of employer opinions regarding the importance of basic academic skills, the need to teach an "invisible curriculum" that includes good work habits and attitudes, and the necessity of strong business-industry-education ties. Secondly, this summary of comments made during open discussion forums can be compared later in this report with the results of the employer survey conducted by the State Council. The following sections describe how the survey was conducted and discuss its findings.

SURVEY OF EMPLOYERS IN SOUTH CAROLINA

The preceding section highlighted findings from a number of national and state-level studies of employer experiences with and perceptions of vocational education and its graduates. The remainder of the report describes the methods used, results found, and conclusions drawn from a formal survey of employers in South Carolina that was conducted in late 1985.

PURPOSE OF THE SURVEY

The purpose of the survey was to obtain, from a representative cross-section of employers in various industries throughout the state, information regarding hiring and training practices, expectations, and perceptions as they relate to vocational education programs at the high school level. The study was not just concerned with the satisfaction of those who regularly employ vocational graduates, but also the perceptions and practices of the business community in general. Therefore, the survey was designed to compare the responses of a random sample of employers representing various industries, areas of the state, and work force sizes. There was also some interest in assessing employers' views on industry developments and changes that will affect the training needs and skill requirements of entry-level workers in the next 5-10 years.

SURVEY METHODS

Although the response rate to mail surveys of employer perceptions tends to be relatively low (8-12%), standardized questionnaires have many advantages over other assessment methods in terms of expense, ease of tabulation, and response anonymity. After weighing the advantages and disadvantages of a written survey, as well as other survey methods such as personal or telephone interviews, the Special Study Committee decided that the maximum number of employers could be reached through a mail questionnaire. Also, information on employer perceptions collected through the state-wide forums could be used as a check on the validity of the survey findings.

The Survey Form

After carefully reviewing the results of similar studies in other states, and the concerns expressed by employers during the discussion forums, specific items were drafted, revised, and organized into an 11x17, single-fold survey form. A copy

of the survey, which contained 13 fixed-choice and four open-ended items, can be obtained from the State Council office. Included in the survey were questions about employer demographics (business classification, size, etc.), hiring and training practices, knowledge about and involvement with local vocational programs, opinions about desirable employee attributes and the best ways to assess training program effectiveness, and employer experiences with and suggestions for vocational programs. To improve the rate of returns, a cover letter urging employers to participate in the survey was prepared by Governor Riley and printed as the first page of the form.

The Sample

Given the large number of businesses in South Carolina (approximatley 60,000), it was necessary to draw a rather large sample that would be representative of the state. It was also important that the sample include businesses that knowingly hired graduates of vocational programs, as well as those who did not.

Primary Source of Addresses: The bulk of the sample was drawn from the computerized files of Dun & Bradstreet, which maintains the most comprehensive database on businesses and many public agencies in the nation. Each record includes the name of the company's executive (owner, president, director, etc.), its mailing address, industry classification and size range, and other information that can be used for marketing purposes.

With the assistance of Dun's Marketing Services, the distribution of businesses in South Carolina was analyzed by industry classification and size (number of employees). Of the nearly 60,000 businesses listed, 3700 were eliminated because their size was unknown. Also omitted were approximately 31,000 family-operated businesses, sole proprietorships, and other companies with little employment activity (less than 5 employees). Several hundred public agencies (correctional systems; government, social service, and conservation offices) were added to the potential pool.

A stratified random sampling technique was applied to the 25,000 businesses and agencies remaining in the "population pool." For those companies with 5 to 20 employees (approximately 18,000), a 20 percent selection criterion was used -- every 5th listing. For the remaining 7,000 businesses that employed more than 20 people, a 50 percent selection criteria was programmed -- every second listing. This random computer selection process produced a total sample of slightly less than 7100 addresses. The address labels were purchased in zip code order so that a check for

duplicates could be made. Only one survey was sent to each address, which in most cases was a single business establishment, plant, school, or office. Chain stores and branch offices or plants received separate surveys if they were listed individually with Dun & Bradstreet and were randomly selected.

Supplemental Source of Addresses: To ensure that a relatively large number of known employers of vocational graduates would be included in the sample, a supplemental source of addresses was used. Each Director of the 54 Area Vocational Centers (AVCs) was asked to submit the name and address of at least 10 employers who had hired one or more vocational program completers in the past year. Directors were asked to submit a representative list that would include businesses of various types and sizes. After eliminating duplications, a total of 439 addresses were added to the Dun & Bradstreet sample. The business classification and size of the companies provided by the AVC Directors were not known prior to mailing.

Survey Distribution

Given the large sample size, a local mailing service with automation capabilities completed the actual mailing. For this reason, no pre-coding of surveys by industry size, type, or geographic location was possible. The determination of a respondent's classification in these categories was based on self-report in the survey itself.

A total of 7,528 surveys were mailed first class on December 3, 1985, with a deadline date of December 15. Computer analysis of the returned surveys began in early January, 1986, when no additional forms were being received.

CLARIFICATION OF TERMS

Throughout the following sections, the term "industry" or "industry group" refers to the industrial classification of a business or agency. The standard industrial classifications (SICs) include: agriculture/forestry/fishing, wholesale trade, retail trade, construction, finance/insurance/real estate, mining, services, manufacturing, transportation/communications/utilities, and public administration.

The groupings used in this report correspond to the SICs, with a few exceptions. Due to the small number of businesses engaged in mining, no surveys were returned in this category, and it was deleted from analysis tables. The number of returns from public agencies was small, and these responses were included in the

services group. In most cases, banking was analyzed separately from finance/-insurance/real estate, the SIC in which it is typically included. Businesses who described their primary activity as both "sales and service" were coded as "service" firms. Hotels and motels (normally classified as service) that also operated restaurants and lounges (normally classified as retail sales) were coded according to their primary activity -- service.

The terms "company," "business," "business/agency," "firm," "employer," and "respondent" are all used interchangeably throughout the results section. These terms refer to the business establishment, plant, school, office, or farm that returned an individual survey form.

Rarely do all respondents complete all the items or sub-parts of items on a questionnaire. Therefore, the notation "N=(number)" refers to the number of respondents who answered a particular question or item, and who were included in a percentage calculation or sum.

RESULTS OF THE EMPLOYER SURVEY

DESCRIPTION OF RESPONDENTS

The disposition of all surveys mailed, returned, and subsequently analyzed was as follows:

Dun & Bradstreet Labels	7,089
Supplemental Labels from AVCs	+ 439
Total Surveys Mailed	= 7,528
Returned "Undeliverable"	- 232
Total Sample Reached	= 7,296
Number Returned and Complete	1,245
OVERALL RETURN RATE	17%

Of the 7,296 surveys distributed, 1245 were returned and included in the data analysis. The overall return rate of 17 percent is acceptable for this type and size of mailing. Return rates varied somewhat across business classifications, from a high of 25 percent for manufacturing, to a low of 8 percent for wholesale trade. However, wholesale trade is often mis-classified in self reports (confused with manufacturing), resulting in its under-representation in many of the tables.

Characteristics of Companies Who Responded

Table 1 compares the distribution of companies and agencies to which a survey was mailed with those who completed and returned the form, by industry classification. This table reflects the "representativeness" of the group of respondents.

Table 1: Comparison Between Total Sample and Survey Respondents

BUSINESS CLASSIFICATION	Surveys Mailed (Sample) N	%	Surveys Returned (Respondents) N	%
Agric/Landscape/Forest	135	1.8	23	1.9
Construction	780	10.4	130	10.5
Manufacturing	1240	16.5	282	22.7
Transport/Comm/Util	331	4.4	52	4.2
Wholesale Trade	602	8.0	55	4.4
Retail Trade	1699	22.6	189	15.2
Finan/Insur/Real Est	477	6.3	82	6.6
Services	1825	24.2	430	34.6
Unknown	439	5.8	2	--
TOTAL	7528		1245	

The distribution of survey respondents across business classifications matched fairly well the distribution of the total sample, and thus the distribution of South Carolina businesses. Service and manufacturing businesses were slightly over-represented, while wholesale and retail trade were somewhat under-represented. However, the distribution of the companies in the total sample whose classification was unknown, and discrepancies between Dun & Bradstreet codes and self-reported classifications could account for some of these differences.

Table 2 summarizes other characteristics of the 1245 companies and agencies that responded to the survey. According to these percentages, the respondent group represented a good cross-section of employers by areas of the state, business size (i.e., number of employees), and position of the person who actually completed the survey. In reference to position titles, "other" typically meant the office manager or someone whose position was not identified on the form.

Table 2: Characteristics of Survey Respondents
(N=1245)

		N	%
AREA OF THE STATE	Coastal	296	24%
	Midlands	326	26%
	Pee Dee	127	10%
	Piedmont	475	38%
	More Than One Area	21	2%
NUMBER OF EMPLOYEES	Under 10	245	20%
	10 to 15	150	12%
	16 to 50	364	29%
	51 to 100	200	16%
	101 to 500	213	17%
	Over 500	71	6%
TITLE OF RESPONDENT	Executive	630	51%
	Personnel Manager	235	19%
	Supervisor	220	18%
	School Official	61	5%
	Other	99	8%

HIRING AND TRAINING PRACTICES

To get some idea of the volume of hiring that occurs in occupations for which vocational training is geared, employers were asked to indicate the average number of people hired annually in various occupational groups. The occupational categories listed for this item corresponded to those used by the Employment Security Commission, but the groups "professionals" and "managers/officers" were omitted.

Collectively, the companies and agencies who responded to the survey reported hiring nearly 31,000 people annually at the high school diploma level. A breakdown of reported "new hires" by occupational group, and the proportion of respondents who hired workers in these categories, is shown in Table 3.

Table 3: Typical Hiring Practices Among Respondents

	Typical Number of Annual Hires	Percent of all New Hires	Percent of Respondents Hiring Them
Skilled	3805	12%	41%
Secretarial/Office	3639	12%	53%
Sales/Store Clerks	3010	10%	19%
Service	4412	14%	18%
Unskilled	7894	26%	42%
Production/Assembly	7786	25%	18%
Farming/Landscape	145	1%	3%
Other (e.g., drivers)	239	1%	1%

According to results displayed in the second column, the majority of reported annual hires at the high school diploma level were in the unskilled (26%) and production/assembly (25%) categories. The third column of Table 3 reflects the percent of businesses and agencies who hired any workers in the various categories. Analysis of this column shows that over half of the respondents had hired at least one office worker (secretary, teller, wordprocessor, etc.) in the past year, and slightly over 40 percent had hired unskilled or skilled workers. Hiring practices in other categories were highly related to the type of business or agency: retail firms hired sales personnel, service agencies hired service workers, etc. Most respondents, however, had experience in hiring high school graduates in a variety of occupational categories.

Applicant Shortages

To determine if any industries were experiencing applicant shortages, employers were asked to indicate the extent to which they were getting enough qualified job applicants for positions that required a high school diploma only. Overall, nearly one third (31%) of the respondents said they did not get enough qualified applicants for entry-level positions.

The shortage of applicants appeared to be most acute in construction. Nearly one half (47%) of the respondents from this industry said they were not getting enough workers to meet their needs. By comparison, only 14 percent of the employers identified with the banking industry said they experienced applicant shortages.

When this item was analyzed according to the size of the business (number of employees), no significant differences were apparent. However, there were some differences across the four regions of the state (Coastal, Pee Dee, Midlands, and Piedmont). Compared to 35 percent of the respondents from the Midlands, and 37 percent from the Piedmont, only 20 percent of the respondents from the Pee Dee area reported applicant shortages.

In-house Training Practices

Considering those employees hired with a high school diploma only, respondents were asked to indicate how these employees were typically trained. Table 4 summarizes their responses. Since a few respondents checked more than one option, totals may exceed 100 percent. Also, because banking is somewhat different from other types of businesses in the Finance/Insurance/Real Estate category, it was analyzed separately.

Table 4: How Employees Are Usually Trained

BUSINESS CLASSIFICATION	N	Before Employed	Mostly OJT	Before and Some OJT	None Needed
Agric/Landscape/Forest	22	--	50%	23%	27%
Banking	36	6%	86%	8%	--
Construction	130	11%	40%	38%	12%
Finan/Insur/Real Est	46	11%	52%	30%	7%
Manufacturing	282	5%	61%	32%	7%
Retail Trade	189	2%	70%	17%	15%
Services	430	12%	41%	43%	6%
Transport/Comm/Util	52	10%	40%	50%	2%
Wholesale Trade	55	7%	55%	29%	11%
OVERALL	1242	8%	51%	33%	8%

According to this table, the majority of respondents in banking, retail trade, and manufacturing provide in-house (OJT) training, and require few employees to have specific pre-employment training. These employers typically provide on-the-job training for bank tellers, sales clerks, and some production/assembly workers. Businesses and agencies in which pre-employment training appears to be more important include construction (for skilled jobs), finance/insurance/real estate (particularly insurance), transportation/communications/utilities (especially for

drivers), and some service occupations such as in the health, corrections, and repair fields. Compared to all other industries, a larger percent of employers in agriculture/landscaping and retail sales (especially food and beverage) said little or no systematic training was required.

Nearly all of the respondents said they provided some in-house training, for some categories of employees. A general pattern was that respondents provided little formal training for secretarial and office personnel, other than acquainting the new employee with their equipment. Skilled personnel (plumbers, carpenters, mechanics, machinists, etc.) were generally expected to be trained prior to employment, but many also worked for as long as a year or two in some type of formal or informal apprenticeship arrangement. Unskilled personnel in construction, manufacturing, retail sales, and service were provided only a few hours or days of orientation and then closely supervised. Training for production/assembly workers varied considerably, depending upon the specific job.

Description of In-house Training

Among those who described their in-house training program, nearly half (49%) said it was rather unstructured. That is, new workers are assigned to and instructed by an experienced employee or supervisor until they become proficient. About 11 percent of the respondents described a "semi-structured" program in which a new worker receives some formal instruction (e.g., film strip, audio-slide presentation, demonstration, self-paced manual) paired with supervision and practice. Only 3 percent of the respondents reported that new employees receive a structured in-house training program. Such programs, typically described by insurance companies and automotive dealers, involve one to three weeks of formal training at company headquarters.

Many construction companies indicated they operated apprenticeship programs through a union or training association. A number of retail, hotel/motel, and food/beverage establishments reported that all inexperienced personnel had to be trained in customer relations and in the operation of electronic cash registers and/or mini-computers.

Of those respondents who specified the length of their OJT, 43 percent said it usually lasted a few hours to several days. Another 40 percent said that new employees were "in training" or on probation for one to four months, depending upon the specific job. About 17 percent said that new employees were not truly profitable for six months or longer. The latter tended to be the case in automotive repair, construction, and some plant jobs. It was clear from the responses, however, that "length of training" does not have a common definition among employers.

For some, it means the actual length of a structured training program; for others, the official probationary period for new employees, such as 30-60 days; for still others, it meant the amount of time required for a new employee to become truly proficient at the job.

Differences Across Industries

Survey responses indicated that even within a given industry, there was considerable variability with regard to the training provided. For example, a respondent in the manufacturing sector commented, "Machine operators receive essentially all their training OJT in 30-90 days, depending upon the person's aptitude and learning ability. Maintenance mechanics are expected to be fully trained before we hire them, but they receive training in our specific equipment through OJT, which may last up to six months or a year." In chemical manufacturing, an operator may require 6-12 months of training, while some production workers can be oriented to their jobs in a few hours. In food and beverage establishments, waitresses were trained on the job, while cooks were expected to be fully trained before employment.

In-house training for secretaries/office workers varied considerably, depending upon the specific job. Length of training ranged from minimal orientation to a particular office's equipment and procedures, to as much as one year of OJT for office personnel working in vacation rentals and insurance agencies. Bank tellers tended to fall between these extremes, receiving 7-10 days of semi-structured training, followed by about one month of close supervision.

These differences, unique to each industry, make it very difficult to formulate generalizations about employer hiring and training practices in a way that would be useful for vocational programs. In fact, the most frequent comment made by respondents regarding the training provided was that "it depends on the job and the person."

PREFERRED EMPLOYEE CHARACTERISTICS

From a list of nine major characteristics, respondents were asked to indicate those qualities which were sought most often in new employees. Although choices were to be limited to the four most important characteristics, some respondents checked more than four, or commented that all were important. Table 5 shows the relative importance of each of the nine characteristics, based on the percent of respondents who checked each as being an important trait or skill that was looked for in new employees.

Table 5: Desirable Characteristics in New Employees

Business Type	Spec Skills	Work Exper	The 3 Rs	Work Habits	Get Along	Little Superv	Learn Tasks	Verbal Skills	Aptit-tude
Agric/Lands/For (N=23)	17%	30%	4%	78%	39%	61%	57%	4%	35%
Banking (N=36)	42%	47%	25%	78%	53%	19%	58%	61%	17%
Construction (N=130)	58%	57%	15%	79%	38%	38%	54%	8%	44%
Fin/Insur/RE (N=46)	43%	46%	28%	76%	39%	54%	35%	48%	26%
Manufacturing (N=282)	48%	53%	30%	85%	52%	25%	47%	11%	49%
Retail Trade (N=189)	27%	33%	41%	93%	65%	44%	42%	42%	26%
Service (N=430)	55%	43%	33%	81%	50%	39%	40%	34%	36%
Trans/Comm/Util (N=52)	50%	54%	42%	90%	40%	35%	33%	27%	52%
Wholesale Trade (N=55)	25%	45%	44%	87%	56%	53%	44%	24%	20%
OVERALL	**47%**	**46%**	**32%**	**84%**	**51%**	**37%**	**44%**	**27%**	**37%**

Using overall percentages, the importance of the nine characteristics can be ranked in the following order:

1. good work habits such as punctuality, dependability, and cleanliness
2. the ability to get along with supervisors and other employees
3. specific skills required for the job
4. prior work experience
5. willingness to learn new tasks
6. ability to work with little supervision (tied with #7)
7. general aptitude for the job (tied with #6)
8. reading, writing, and math skills at a minimum of 10th grade level
9. good verbal communication skills

Thus, positive work habits, good interpersonal skills, specific job skills, and actual work experience were the "top four" characteristics most sought by employers in making hiring decisions. The top priority, good work habits and attitudes, was rated as an important characteristic in new employees by over three-fourths of the respondents in all industries.

Contrary to many studies conducted in the past ten years, "basic academic skills" was not rated among the most important characteristics. However, many of the written comments indicated that employers are concerned about the number of high school graduates who have difficulty with basic comprehension, writing, math, reasoning, and problem-solving tasks.

Differences Across Industries

As Table 5 shows, there was considerable variability across industries with regard to the characteristics most sought in new employees. Based on the percent of employers who checked the item, specific jobs skills were most important in the construction and service industries, and least important in agriculture and trade (wholesale and retail) businesses. Prior work experience emerged as most important in construction, manufacturing, and transportation/communications/utilities industries. Basic academic skills were most preferred in trade (wholesale and retail) and transportation/communications/utilities industries, but were of much less importance in construction and agriculture. The ability to get along with others emerged as most important in businesses involving considerable customer contact and/or teamwork (retail and wholesale trade, manufacturing, banking, and service), while the ability to work with little supervision was logically more important in smaller operations such as agriculture, insurance/real estate, and wholesale trade.

Good verbal communication skills appeared to most important in banking, finance/insurance/real estate, and retail sales, industries that require a high level of verbal exchange with customers. General job aptitude was most frequently rated as important in industries employing large numbers of skilled craftsman, such as transportation/communications (especially for truck drivers), manufacturing (particularly certain skilled production jobs), and construction.

These differences between business/industry groups with regard to desirable worker characteristics have important implications for occupational training programs by suggesting different clusters of skills and traits that may best prepare graduates to enter various fields. While these findings are generalizations that obscure important subtleties, such as the need for a relatively high level of math skills in certain construction jobs, they suggest that training programs might benefit from identifying the cluster of skills and traits that are most sought by

employers in various industries. This may be especially important in areas experiencing rapid growth and change that will affect job requirements.

Differences Between Small and Large Companies

To determine whether preferred worker characteristics vary according to the size of the company or business (number of employees), respondents were divided into two groups: those with 50 employees or less (small), and those with more than 50 employees (large). For each of the nine worker characteristics listed in the survey, a comparison was then made between the percent of employers in each group who indicated the characteristic was important in selecting employees.

Differences between small (N=760) and large (N=485) companies emerged in several important areas. Specific job skills and prior work experience were somewhat less important to small businesses (near 42%) than to larger companies (near 54%). Conversely, the ability to work with little supervision was more important to small companies than to large ones (46% versus 25%). This result makes intuitive sense. Small companies may be more willing to train new employees (and perhaps are more accustomed to having to do so), but because of the limited availability of supervision, ultimately need employees who can work independently and under their own initiative.

Differences Across Areas of the State

To determine if preferences for various worker characteristics varied according to the geographic location of a business, employer responses were compared between the Coastal (N=297), Midlands (N=325), Pee Dee (N=126), and Piedmont (N=474) areas of the state. There were no outstanding differences (i.e., greater than 10 percent) between the four regions in terms of the percent of employers who rated a given characteristic as important.

PREFERENCE FOR VOCATIONAL GRADUATES

Employers were asked to indicate the extent to which they preferred hiring people who had received vocational training in high school over those who had not. Overall, nearly one half (46%) of the respondents said they definitely preferred vocationally trained workers, and another 27 percent said they preferred such workers "to some extent." The remaining 27 percent said they had no preference.

The industry in which the largest proportion of respondents said they preferred to hire people who had taken vocational training (definitely or to some extent) was agriculture (86%). Those industries in which the smallest percent of respondents

said they had such preferences included banking (56%), finance/insurance/real estate (60%), and retail trade (61%). It is noteworthy that these three industries also tend to do a great deal of on-the-job training (tellers, sales clerks) or to hire primarily college graduates (insurance sales people, real estate agents).

A higher proportion of employers in large companies preferred vocational graduates than did employers in small companies, but the difference was modest (79% versus 69%). There were no appreciable differences across the four areas of the state regarding preferences for vocationally trained workers.

BUSINESS-INDUSTRY INVOLVEMENT WITH VOCATIONAL PROGRAMS

A series of questions were included in the survey to assess the extent to which businesses and agencies are knowledgeable about, and involved with local vocational programs. Table 6 summarizes employer responses to these items.

Table 6: Business-Industry Involvement with Vocational Programs

ITEM	N	Definite Yes	No	Some Extent
Know which vocational courses are offered at the high school level	1238	35%	22%	43%
Have a say about the content of vocational courses offered in local high schools	1200	15%	70%	15%
Desire a say about the content of vocational courses taught in local high schools	1200	39%	26%	35%
Participate in "Career Day" or career fair for high school students	1199	26%	60%	14%
Use vocational facilities or instructors for company or agency training	1196	14%	72%	13%
Provide co-operative or apprenticeship program for high school students	1194	20%	67%	14%
Tell vocational staff what your company or agency wants and needs in new employees	1204	34%	49%	17%
Encourage employees to get advanced technical training beyond high school	1206	67%	15%	18%

Knowledge of Vocational Programs: Over three-fourths of all respondents indicated they were definitely or somewhat familiar with the vocational courses offered at their local high schools. Across industry groups, the percentage of respondents who were knowledgeable ranged from a high of 91 percent among finance/insurance/real estate businesses and 89 percent for manufacturing, to a low of 67 percent among those in wholesale trade and 69 percent of the employers in banking.

Having a Say About Course Content: Across all industry groups, 30 percent of the respondents said they had a say about the content of vocational courses taught in the high schools in their area. The greatest degree of input, as measured by the percent of respondents who checked "definitely" or "to some extent," was by businesses involved in agriculture/landscaping (47%) and manufacturing (45%). In most other industry groups, less than 30 percent of the respondents indicated they had input to vocational course content.

Desire to Have a Say About Course Content: In comparison to the 30 percent of respondents who said they did have a say in the content of vocational courses, nearly three-fourths (74%) said they wanted to make some input. The desire for participation was greatest among respondents in manufacturing (81%) and construction (78%) industries, and lowest amony those in the agriculture (50%) and finance/-insurance/real estate (64%). With one exception, all industries expressed a desire for more input on vocational courses than they had currently. In agriculture, the percentage of employers who had input, and the percent who wanted input, was the same. It would seem that employers in this industry are satisfied with their level of involvement, but generalizations must be made with caution, given the relatively small number of respondents in this group.

Participation in Career Days: Providing information at career fairs is one indicator of the extent to which business and industry recruits high school students for entry-level jobs. In the survey, 40 percent of all respondents said their company or agency participated in a career day or career fair for high school students. The industry groups in which this average was exceeded were: banking (67%), service (48%), and manufacturing (44%). Respondents in the remaining groups indicated participation rates of less than 40 percent.

Use of Vocational Resources: Only 27 percent of the respondents said they had ever used local vocational facilities or instructors for company or agency training. Survey respondents in the manufacturing business had made most use of these

resources (40%), followed by banking (31%). Less than one fourth of the respondents in the remaining groups said they had ever used facilities or instructors to assist with their in-house training.

Co-operative and Apprenticeship Programs: A total of 34 percent of the respondents said their company or agency served as a co-operative education site or provided a supervised apprenticeship program for high school students. Write-in comments indicated that some companies provided apprenticeship programs, but not through the high school. The largest percent of companies who provided co-op or apprenticeship programs were in the areas of banking (43%) and service (37%). Few companies in finance/insurance/real estate (21%) or wholesale trade (24%) provided such learning experiences.

Communicating Needs: When asked about the extent to which their companies told vocational instructors what was wanted and needed in new employees, only about one half of the respondents said they had done so. In terms of the percent of respondents who answered "definitely yes" or "to some extent" to this item, the most communication with educators appeared to occur in manufacturing (65%). Respondents from the areas of transportation/communications/utilities and from wholesale trade reported the lowest incidence of communication -- 36 percent and 39 percent, respectively.

Encouraging Advanced Training: The vast majority of respondents (85%) said their company or agency did encourage its employees to get advanced technical training beyond high school. Using the percent of respondents who checked "yes" or "to some extent" as an indicator of the need for or value placed on postsecondary education, the industry which most encouraged advanced technical training was service (90%). Relatively speaking, advanced technical training was less encouraged in agriculture (65%), but overall, the percentages were high for all industries.

In addition to checking their responses, some employers made marginal comments regarding their knowledge of and involvement with vocational programs. Several said that while they had no input currently, they would welcome an opportunity to become more involved with schools, particularly in the development of new programs such as landscaping, interior decorating, and small business management. Age and other restrictions were cited as barriers that prevent some businesses from establishing co-operative or on-site training programs, and from hiring recent high school graduates.

Differences Between Small and Large Companies

To determine if the size of a company or agency affects its degree of involvement with local vocational programs, respondents were again clustered into two groups: small (50 employees or less) and large (more than 50 employees). Comparisons were then made between the percent of employers in each group who answered "definitely yes" or "to some extent" on each of the activities in Table 6.

With the exception of "encouragement of advanced training," there was a difference of at least 10 percentage points between small and large companies on all the activities listed. Compared to large companies, small companies reported that they were less knowledgeable about vocational programs (89% versus 71%), had input into the content of vocational courses with much lower frequency (46% versus 22%) and desired input regarding the content of vocational courses to a lesser extent (85% versus 68%). Compared to large companies, fewer small companies said they participated in career fairs (59% versus 31%), used vocational resources for company training (42% versus 20%), or communicated their needs to vocational educators (69% versus 41%).

It is also interesting that compared to large companies, a smaller percent of employers in small companies (41% versus 30%) said they provided co-operative or apprenticeship programs for high school students. Although the reasons for this cannot be determined from the survey, the feasibility of co-operative arrangements with small businesses merits further exploration by vocational programs.

Differences Across Areas of the State

To determine if awareness of and involvement with vocational programs was greater in some locations than in others, a comparison was made between employers in each of the four regions of the state. This comparison revealed some important differences.

For nearly all activities listed, the percent of employers who answered "yes" or "to some extent" on items regarding knowledge and involvement was lowest in the Coastal region, and highest in the Pee Dee area. The percent of affirmative responses in the other two areas (Midlands and Piedmont) fell between the two extremes. The exceptions to this pattern related to the desire to have a say in course content, the provision of co-operative programs, and the encouragement of advanced training. On these activities, the percent of affirmative responses was still highest in the Pee Dee region, but fairly similar across the other three areas.

PERCEIVED ROLES FOR VOCATIONAL EDUCATION

From a list of ten possible roles for vocational education, respondents were asked to check up to four purposes that they perceived as most appropriate for vocational education programs at the high school level. Responses to this item are summarized in Table 7. In this table, the ten items are ranked in order of their priority, as measured by the frequency with which respondents checked the item as an important role or purpose.

Table 7: Perceived Roles for Vocational Education

	Number Who Checked Item	Percent
Encouraging the development of good work habits and attitudes	962	77%
Providing specific job training to those not going on to college	870	70%
Teaching the application of basic skills in various occupational areas	837	67%
Helping students find careers that match their abilities	602	48%
Teaching general skills that can be adapted to a cluster of related jobs	574	46%
Preparing students for advanced training in a technical school or college	376	30%
Offering skill up-grading and re-training for employed workers	208	17%
Helping new companies or businesses in training needed workers	186	15%
Helping graduates find jobs	158	13%
Providing enrichment and life skills such as homemaking, personal typing, child care	111	9%

Analysis of the table shows that the first three purposes appear to be clear priorities -- two thirds or more of the respondents indicated that in their opinion, the development of good work habits, job specific skills, and applied basic skills should be the focus of vocational programs. Opinions were split regarding the next

two purposes -- career exploration and the development of more generic job skills. That is, about 50 percent of the respondents felt these purposes were among the top four priority roles. Nearly one third of the respondents thought vocational programs should be preparing students for advanced training. The remaining purposes were believed to be important by a relatively small percent of the respondents.

Differences Across Industry Groups

Analysis across various business-industry groups revealed some important similarities and differences. The development of good work habits and attitudes was viewed as important in all industries, but within a considerable range. The percent of respondents who checked this item as a priority role varied from 84 percent (wholesale trade) to 61 percent (finance/insurance/real estate).

The provision of job specific training to the non-college bound was viewed as important by 70 percent of the respondents in all industries, ranging from a high of 78 percent in construction to a low of 62 percent in transportation/communications/-utilities. Although it was not possible to compare the opinions of respondents in various occupational groups (professionals, craftsmen, etc.), written comments on the issue of job specific training revealed an interesting trend. Respondents who were in the skilled trades (builders, mechanics) freqently commented that vocational programs needed to attract more capable students and focus on teaching specific skills for employment. Respondents who were themselves professionals (teachers, physicians, accountants) often commented that vocational programs should exist primarily for the non-college bound and should focus on basic academic skills such as reading and math.

The percent of respondents who thought that the teaching of applied basic skills in various occupational areas should be a priority was highest in retail trade (77%) and lowest in construction (60%). In terms of career exploration and counseling, the percent of respondents who checked this item was highest in the areas of transportation/communications/utilities, service, and construction (about 55% in these groups), and lowest in agriculture and manufacturing (about 40%). The range with regard to the importance of teaching general skills for a cluster of related jobs varied from 59 percent in finance/insurance/real estate to a low of 32 percent in construction.

There was considerable variability across industries with regard to the importance of offering skill upgrading and re-training for current employees. This was viewed as an important role for vocational education by 29 percent of the respondents representing wholesale trade, but only 4 percent of those in agriculture.

The same pattern of responding occurred with regard to helping new companies and businesses by training needed workers (start-up training). This was seen as a priority role for vocational education by 18 percent of the respondents in wholesale trade, manufacturing, and banking, but by less than 8 percent of those in agriculture and finance/insurance/real estate.

Findings with regard to the importance of helping high school graduates find jobs revealed a discrepancy between the evaluation criterion for vocational programs set by legislation (i.e., job placement) and the activities viewed by employers as priorities for vocational education. Overall, only 13 percent of the employers who responded to the survey viewed assistance with job placement as an important activity of vocational programs, ranging from a high of 20 percent in wholesale trade to a low of 4 percent in agriculture and 7 percent in manufacturing.

The provision of non-occupational vocational skills, such as personal typing, homemaking, and other "life skills" has traditionally been an important component of vocational education. However, very few employers who completed the survey (9%) felt such training should be a major role for vocational education. This finding may reflect the opinion of many employers that "vocational" education should not include non-occupational programs. Yet many of the skills learned in non-occupational programs such as home and time management, interpersonal relations, budgeting, and career exploration are essential elements of what employers say they want most in entry-level employees -- good work habits, attitudes, and interpersonal skills.

Differences Between Small and Large Companies

For each of the ten purposes or roles listed, a comparison was made between the responses of employers in small and large companies. In terms of the percent of respondents in each group who checked a particular role as being important, there were no differences greater than five percentage points. Thus, in terms of the perceived priorities for vocational education, small and large companies are in agreement.

Differences Across Areas of the State

A comparison was also made between the responses of employers in the Coastal, Midlands, Pee Dee, and Piedmont areas of the state. In terms of the percent of respondents in each region who felt a particular role was among the "top four," only one noteworthy difference emerged. Preparation for advanced job training and career counseling were important to a higher proportion of employers in the Piedmont region than in the Pee Dee area (differences greater than 12%).

OUTCOME CRITERIA FOR VOCATIONAL EDUCATION

From a list of seven evaluation criteria commonly used for accountability purposes in vocational education, employers were asked to indicate which measures they felt best gauged whether or not vocational programs were fulfilling their purposes. Table 8 summarizes their choices, which have been listed in order according to the percent of respondents who checked the item. Again, responses were limited to four choices, but many employers checked only two or three.

Table 8: Employers' Opinions About the Best Outcome Measures
(N=1245)

	Number Who Checked Item	Percent
Satisfaction of employers who hire graduates	1120	90%
Percent of graduates employed in training-related jobs	842	68%
How well programs respond to training needs of local businesses/agencies	680	55%
Percent of graduates employed, whether or not related to area of training	363	29%
Ability to keep potential dropouts in school	293	24%
Number of students who complete a course of vocational study	237	19%
Number of students enrolled in vocational courses	182	15%

From the employer's perspective, vocational education should be held accountable for three main outcomes -- employer satisfaction, training-related placement, and responsiveness to local labor needs. Recent legislation, however, has eliminated reporting requirements for all but training-related placement. Although assessment of labor needs is a required part of program funding applications, measures of employer satisfaction (by far the highest rated outcome measure) are not included in the program evaluation process.

Two other findings are noteworthy. While job placement assistance was given a low priority by employers in terms of what vocational education should be doing,

training-related placement was viewed as the second most valid accountability measure. Also, it is not clear how training-related placements as an accountability measure can be related to the skills and abilities employers say they most want and expect in entry-level workers (i.e., good work habits).

These results indicate that from the employer's perspective, vocational education should serve primarily the needs of business and industry, rather than say, the needs and desires of students or the general goals of education. In fact, related comments showed that many employers felt vocational programs should train students for the "specific needs of employers," even when their labor needs were fairly low. While these views may seem "self serving," they point out important differences between the priorities of the business community and educators that could pose a barrier to collaborative efforts.

Differences Across Industry Groups

Understandably, 90 percent of all employers felt that their satisfaction with graduates hired was the best way to determine if vocational programs were doing a good job, and there was little variability on this item. Across all industries, the percent of employers who selected training-related placement as a critical measure was near the overall average (68%), with the exception of agriculture (48%). There was also agreement (i.e., little variability) across industries on the use of "responsiveness to local business needs" as a measure of accountability in vocational education.

Nearly 40 employers who responded to the survey listed an "other" measure that they felt would be a good indicator of how well vocational programs were doing their job. The two most frequently listed criteria were "number or percent of students who continue their technical education," and "the extent to which graduates remain in their jobs or career fields." Several employers commented that training-related placement rates calculated shortly after graduates obtain employment fail to reflect the actual retention rate, and that many young people simply do not stay in the fields for which they were trained.

Differences Between Small and Large Companies

When the responses of employers in small companies were compared, as a group, to the responses of employers in large companies, no differences emerged with regard to the most relevant ways of assessing vocational program effectiveness. For each outcome measure listed, responses varied by only a few percentage points. Thus, in terms of what employers feel are the most important outcome measures for vocational programs, small and large companies are in relative agreement.

Differences Across Areas of the State

When responses were compared across the four areas of the state, an appreciable difference emerged on only one item -- the number of course completers. Compared to employers in the Coastal region, a larger percent of employers in the Pee Dee area felt that the number of completers was a good measure of how well vocational programs were doing (13% versus 27%). This compares to an average of 19 percent of the employers in the other two regions.

EMPLOYER BENEFITS FROM VOCATIONAL EDUCATION

Employers were asked to indicate whether their business or agency had gotten any benefit from vocational programs offered at the high school level, and in what way or why not. In addition to calculating the number of respondents who answered yes or no, written comments regarding specific reasons were analyzed and grouped into major categories. The results of this analysis are shown in Table 9.

Table 9: Reasons Why Employers Do or Do Not Benefit From Vocational Programs

	N	%	REASON
	304	73%	Have hired/satisfied with graduates
DO BENEFIT	44	11%	Vocational graduates require less OJT
	27	6%	Had good results from co-operative program
N=503	23	6%	Vocational graduates have better work habits
(44%)	12	3%	Program trained already-employed workers
	6	1%	Students provided some volunteer service
	417		TOTAL WHO GAVE A REASON
			Unable to Benefit: (N=239)
	99	22%	Limited or no hiring being done
	78	18%	Most available jobs require advanced degree
	52	12%	Business too specialized; provide own OJT
DO NOT BENEFIT	10	2%	Hiring restrictions (age, licensing, etc.)
			Could Benefit, But: (N=204)
N=637	92	21%	No courses or program offered in area
(56%)	87	20%	Unaware of programs offered; not contacted
	25	6%	Unsatisfied with those interviewed or hired
	443		TOTAL WHO GAVE A REASON

Of the 1140 employers who responded to this question, 44 percent said their company or agency had gotten some direct benefit from vocational programs. Among the 417 explanations of the specific benefits received, the majority (73%) made reference to the fact that vocational graduates were hired, that these employees possessed needed skills, and/or that the company was generally satisfied with their performance.

The remaining 637 employers (56%) said they had received no apparent benefit from vocational programs, and 443 of them explained why. In the majority of cases -- a total of 54% of the comments -- the factors cited by employers for failing to experience any benefit are outside the control of vocational programs (e.g., limited hiring, educational requirements of available jobs, specialized nature of training needed). However, over 45 percent of the explanations pointed to areas that could be remedied: employers' lack of awareness regarding programs (20%) and the absence of training programs in some areas (21%). Only 25 employers (6%) said they failed to experience any benefits because vocational graduates performed poorly during the interview phase or on the job.

Differences Across Industry Groups

Across industry groups, there was significant variability in terms of the percent of respondents who said they had benefited from vocational programs. The results ranged from a high of 59 percent in manufacturing to a low of 24 percent in agriculture. The bulk of the positive comments were made by manufacturers, and tended to focus on general satisfacation with graduates hired, such as:

> "We have hired many vocational graduates for production jobs. They have a good general aptitude and interest for the kinds of jobs we offer."
>
> "About 73% of our workforce got their training in the local vocational center."
>
> "Many sewing students from the vocational school have been hired by our company."

A significant number of comments referred to the reduced need for OJT among vocationally trained graduates, and the majority of these also came from the manufacturing and retail sectors. Comments such as, "They seem to be easier to train, even if the job is unrelated," and "Having graduates with basic skills in the mechanical area reduces our training costs" were fairly typical among employers in manufacturing. Other comments regarding the benefits of hiring vocational graduates included:

"We have been able to promote vocational graduates in masonry to supervisory positions faster than those without such training."

"Distributive Education classes help orient students to the business world from a realistic standpoint."

"The program in our area stays in touch with us to see what type of operators (textile) are needed so emphasis can be put on that area."

"We hired two students on a work-study basis. One has remained for 10 years and is now one of our most valued supervisors."

The benefit expressed by the majority of employers in all business groups was that graduates had been hired and performed satisfactorily, or that they required less OJT. The industries that appeared to benefit least from the "reduced need for OJT" were those that often provide specific in-house training: service, banking, and some types of retail trade such as food and beverage.

There was also some variability across industry groups with regard to the reasons for failing to realize any benefits from vocational programs. Limited hiring was a major factor expressed by employers in service, wholesale trade, and agriculture industries. Lack of awareness about programs emerged as a prominant factor in the banking industry, while the unavailability of workers was a barrier in construction trades. Employers in the transportation/communications/utilities and finance/insurance/real estate industries frequently cited the fact that most of their positions require advanced training. Employers who expressed dissatisfaction with vocational applicants or workers were primarily in the construction business.

Some typical comments made concerning the reasons for failing to benefit from vocational programs were:

Advanced training needed: "Vocational grads are not qualified to work on today's autos without going on to technical school." "We hire only experienced personnel."

Lack of communication: "We are not familiar with these programs or how they might benefit us." "We're not well informed on the programs. When employees are needed, we do not have a source to contact at the vocational school."

Specialized business: "Ours is a small business that hires mostly unskilled labor, for which minimial OJT is all that is required." "We are a specialized field. It is not feasible for vocational programs to train the small number of workers needed. We do our own training."

Limited or no hiring: "Either they don't apply for our type of work, or no one identifies him/herself as a vocational graduate." "We do not receive applications from vocationally trained grads." "We do not hire anyone directly out of high school."

Dissatisfaction: "They are not adequately trained. Some think they know how to do skilled jobs, but we find they don't." "All of the applicants performed poorly on the job. They had little or no initiative or willingness to work." "Too many of these students can't read, write, read a tape measure, or understand a simple drawing." "Few of these graduates know how to apply for a job. Doesn't anyone in education realize that the first step in getting a job is knowing how to present yourself to an employer?"

Unavailability of workers: "The particular vocational training that would be beneficial to us is not offered at our local schools." "The program we need is not available in our county."

The longest and most descriptive comments regarding reasons for failing to experience any benefits from vocational programs centered on three themes: the lack of knowledge about or communication with programs, the unavailability of certain programs, and dissatisfaction with those interviewed or hired because they lacked basic skills or productive work behaviors.

Differences Between Small and Large Companies

When respondents were grouped according to the size of the company, some important differences emerged with regard to perceived benefits of vocational programs. Sixty one percent (61%) of the employers representing large companies said they had received some benefit from local vocational programs, compared to 33 percent of the respondents in small (50 employees or less) companies. In fact, the size of the company and the percent of employers who said they benefited was positively correlated. Without exception, the larger the company, the higher the percent of respondents who said they had received some benefit.

In terms of the reasons why companies said they had benefited from vocational programs, there was only one major difference due to company or agency size. The percent of employers who said they benefited because "vocationally trained employees require less OJT" was higher among small companies than in large companies.

In terms of the reasons why companies said they had not received any perceived benefit, the differences between small and large companies were very slight. Compared to large companies, small companies more frequently cited "limited or no hiring at this time" (16% versus 26%). "Lack of communication with or awareness of vocational programs" was less of a barrier in very small (less than 10 employees) and very large (over 500 employees) businesses than in companies of any other size.

Differences Across Areas of the State

When responses were grouped and analyzed according to the area of the state, several differences emerged that are worth noting. Compared to the three other regions, a higher percent of respondents in the Pee Dee region said they had benefited from vocational programs (53% versus an average of 41% in other areas).

Among those who had benefited, a higher percent of employers in the Coastal region cited good results from a co-operative program (14%) than in any other region (average of 4%). Among those who had not benefited, there were few differences across the four areas with regard to the reasons given. However, specialized training needs and limited hiring was cited by a slightly higher percent of employers in the Pee Dee area than any other region.

HOW BUSINESS AND INDUSTRY CAN BE BETTER SERVED

In an open-ended question, employers were asked to indicate how they thought high school vocational programs could better serve their company's or agency's needs. All written responses were analyzed and grouped into major categories. The results of this analysis are summarized in Table 10.

Table 10: How Vocational Programs Can Better Serve Business and Industry

N	%	
116	20%	Teach good work habits, attitudes, the realities of employment
116	20%	Offer a specific course or program in (listed)
93	16%	Develop closer ties to local businesses; assess their needs
90	16%	Teach basic skills such as reading, writing, reasoning, math, verbal communications, following instructions
59	10%	Keep businesses better informed about programs, upcoming graduates, competencies of graduates
41	7%	Improve counseling, pre-enrollment screening, discipline
27	5%	Provide more practical experience (co-op, work-study)
31	5%	Other (update curriculum or equipment, get better qualified instructors)
573		TOTAL NUMBER WHO LISTED A SPECIFIC ACTIVITY

Overall, the most prevalent comments regarding how vocational programs can better serve business and industry needs referred to the teaching of good work habits. This is not surprising, since work habits also emerged as a top priority for employers on other items as well. Typical comments in this area were fairly explicit:

"Training needs to include the relationship between good results from work and payday. Some feel that if they simply spend 8 hours on the job, they get 8 hours of pay. This is true -- for about two weeks."

"Teach them more commitment to the job, a better attitude about having to work regular hours, and to be more concerned about the company making a profit. They must understand work values and the importance of their employer making a profit. Too many have no concept of the values of our business system."

"Help students develop a positive work ethic. Teach them that attitude has more bearing on employment than skills. Teach that people are paid more for increasing knowledge of the job and accepting more responsibility."

"Students should be better prepared for the work environment as it actually exists. Students seem to be trained in a class atmosphere, not a job atmosphere. Courses need to be more related to actual jobs -- what is involved and expected."

A fairly large percent of the respondents also listed a specific course or program they felt should be offered to meet their labor needs. A listing of the courses and programs suggested is contained in Appendix A. Some of the most typical comments were to "Train more (tile setters, construction workers, mechanics, maintenance workers, industrial technicians, child care workers, surveyors, etc.)." Other frequently mentioned topics included computers and wordprocessing, such as "Some basic understanding of computers and computer-controlled equipment should be introduced at the high school level."

Over 150 of the respondents made some reference to the need for more communication between business/industry and educational programs -- closer ties, more systematic needs assessments, and more information about programs and students. Some typical comments regarding this need were:

"Check with local companies to see what they need and how to better train students."

"Allow local industries input into programs and to participate in training."

"Get company management involved in course design, some teaching, etc. Use us as advisors -- don't just come to us when a donation is needed."

"Stay in close touch with business and industry leaders, particularly the personnel and employment people."

"Instructors need to be more knowledgeable about jobs and what it takes to compete for jobs. Current workers could make some input here."

"No one has approached me about programs or needs. I'm willing to listen and to discuss it."

"Schools need to advise us about the types of courses they are teaching and the students graduating each year who may be of interest to us. We need to be made aware of local programs and potentially good employees."

Nearly 100 employers emphasized the need for schools to teach the "basics" of reading, writing, reasoning, math, communication skills, and following instructions. Some typical comments were: "Teach the basic subjects. A student who has a good attitude about quality work and profitability will have no trouble finding an employer who will train him or her." "Focus on fundamentals such as reading, writing, language, communications, and computation. The purely technical skills and work routines can be taught more quickly after the fundamentals have been learned." "Prepare graduates who can spell, compose a good sentence, communicate with people pleasantly and politely, using good grammar. These are most important in hiring."

A number of employers expressed concern that vocational education had become a "dumping ground" for underachievers, poorly motivated students (who become poorly motivated employees), and those who had no intention of remaining in an occupation. These employers felt vocational programs needed to do a better job of career counseling, and perhaps screen students before allowing them to enroll in skilled trades courses. Employers in the construction trades, particularly, felt these programs were insufficiently promoted among the more capable students and that good work habits were not being given enough attention. Some typical comments in this category were:

"Do more to promote the construction industry as a career."

"Help students find their interests and skills. We have too many people working in jobs they're not suited for."

"Sewing courses should be offered only to students who are serious about this work - most are not. Some only take the course for easy credit, with no intention of going into sewing as a vocation."

"Students should be exposed to trades that have shortages of skilled workers and be shown that there is a market for these skills."

These comments reflect concern among employers regarding enrollment trends, and suggest that career counseling may be inadequate. However valid that perception may

be, it must be remembered that a host of other factors affect student enrollments, completions, and job selections. For example, labor market situations (availability of jobs, entry-level salaries, career mobility, etc.) exert a strong influence on student interest in various occupational programs. Because there are no "entrance requirements" for vocational programs, there is little control over student enrollment in these elective courses. Lastly, the time lag between shifts in labor market demand and the preparation of graduates is often two to three years.

Differences Across Industry Groups

When suggested improvements were analyzed across industries, some groups contained too few responses to be meaningful. However, in those industries in which there were a substantial number of respondents (70 or more), some similarities and differences emerged. Teaching good work habits was cited frequently by employers in all four of the large groups: construction, manufacturing, retail trade, and service. With the exception of manufacturing, the need to teach a specific course or program was also a predominant suggestion in these groups. The development of closer ties with local businesses was listed frequently in manufacturing and service, sectors which are experiencing rapid change. Increased emphasis on basic academic skills was cited most often by employers in the service industry.

Differences Between Small and Large Companies

Few differences emerged when the responses obtained from small companies were compared to those of employers in large companies. About one fourth of the employers in all size groups suggested that teaching a specific course or program (listed) was one way in which vocational education could better serve their needs. The need to put more emphasis on "teaching good work habits and attitudes" was suggested by a higher percent of employers in moderately-sized companies (16-100 employees) than in companies of other sizes. "Closer ties to local businesses" such as keeping up to date on advances and changes, matching training to job opportunities, developing a better mutual understanding of needs and practices, and involving employers in vocational porgramming, was cited by a higher percent of employers in very large (over 500 employees) companies than in any other size group.

Differences Across Areas of the State

Few differences were apparent when the responses obtained from employers were compared across areas of the state. The need for closer business-education ties was expressed by a smaller percent of employers in the Pee Dee region than in the other

three areas of the state (3% versus an average of 11%). There was a tendency for employers in the Midlands to cite the growing need for practical experiences (work-study, co-operative education) more frequently than employers in other areas, while employers in the Pee Dee and Piedmont areas more frequently suggested that a specific course or program was needed (30% and 25% versus 16% in the other two areas).

INDUSTRY DEVELOPMENTS AND FUTURE SKILL NEEDS

In another open-ended question, employers were asked to list any developments occurring in their businesses and agencies that would require new or updated skills on the part of employees. A total of 446 employers commented on this item. Listed below are some typical comments made by employers in various industry groups regarding future developments and needs:

Agriculture: "environmental impact"; improved knowledge of pesticides

Construction: need for better general education for moving into supervisory positions; commercial building; need for specific kinds of workers (masons, plumbers, concrete finishers, tile setters, diesel mechanics); erection of steel studs; use of survey instruments; blueprint reading; use of heavy construction equipment; single ply roofing

Wholesale Trade: micro-computer operations; telemarketing sales

Retail Trade: meat and produce managers; good basic skills in math and electrical theory; skill in customer service; use of computerized registers; high tech kitchen equipment; store safety and security; and electronics (especially in autos and home electronics)

Transportation/Communications: growth of electronics, microwave transmission, and fiber optics; need for diesel mechanics and electronic repair technicians

Manufacturing: continued importance of good work habits and attitudes; computerized and automated production equipment; more "discipline" in machine operator jobs to meet new production standards; greater adaptability needed to learn new machinery being installed; need for machinists and tool/die workers; use of programmable controls; need for computer-literate workers; computer-aided drafting and CNC machining; increased need for skilled workers and reduced need for unskilled; and need for electronics repairers

Service: more emphasis on public relations and how to communicate with and get along with people; need for security workers; more flexibility to adapt to changes in service industry; expansion in health care fields; growing need for teacher aides; transcription and use of dictating equipment; need for service paraprofessionals (case management aides, drivers, homemaker/home health aides, meal site managers, etc.); greater emphasis on basic communication skills

Sales and service: front wheel drive and unibody construction on autos; mig and plastic welding; repair of computerized equipment on autos; heating and air conditioning duct work layout; digital electronics; solid state electrical controls; computer use (ordering, stocking, inventory control)

Finance/Insurance: computer automation in offices

The majority (57%) of all respondents cited the need for "computer training," but there was wide variation in what employers meant by this comment. The range of explanations varied from familiarity with how to operate computers (enter data, run software programs, understand computer print-outs, operate automated office equipment or electronic cash registers), to the use of CAD/CAM equipment, to general computer literacy (logic, applications, etc.). In most cases, however, "computer knowledge" meant familiarity with and ability to operate computers, not how to program or repair them. The need for training on wordprocessing equipment was also frequently mentioned in this category.

The second most frequently cited development (15% of respondents) referred to electronics -- using and repairing electronic equipment and the need for theory in this area. Another 9 percent of the respondents said that employees were having to deal more and more with automation: operating computerized machines such as robots, and adjusting to the job changes brought about by increased automation.

The remaining 19 percent of the 446 employers who identified current developments and future skill needs cited such factors as the increasing importance of good verbal skills needed to deal with service customers, the need for specific kinds of workers (see Appendix B), the growing importance of worker adaptability as industries adjust to change, and the increasing need for basic academic skills (reading, math) in all jobs. Several employers in the services area stressed the increasing demand for health care and the impact this would have in terms of labor needs.

Quite a few employers suggested that as the economy moves more and more into the service industries, skills in customer and public relations will increase in importance. Many retail establishments had added a service or customer relations department, for which employees with good interpersonal skills were sought. Several employers in the food/beverage business felt that the development of such skills was sorely lacking in most training programs. One restauranteer commented, "The majority of high school graduates we hire have no idea about how to handle themselves with customers. When we hire a recent grad, we have to start OJT with how to say hello."

GENERAL COMMENTS

The last item of the survey asked employers to express any additional comments or suggestions they might have. These comments were nearly equally divided between praise for existing programs and criticisms of vocational courses or the state's educational system in general. Appendix C is a cross section of comments received from employers in a variety of industries across the state.

Many of the comments indicated that employers were not just concerned about education and training. They appeared to be concerned about young people's futures, the declining work ethic, literacy, the roles and functions of various training programs, and the overall business climate of the state. In fact, several key "themes" or general areas of concern seemed to emerge: concern about the eroding work ethic and problems of poor attendance and other negative attitudes; dismay that too many students lacked basic reading, writing, math, and communication skills; concern that vocational programs suffered from a negative image and were a dumping ground for problem students, low achievers, and the disinterested students looking for an easy grade; the need for more cooperation between vocational programs and local industries; and the need to expand vocational education by making it more available to those who can most benefit from such training.

There was also considerable optimism in the various comments made. Several employers said they would be glad to meet with school officials to discuss mutual needs, to offer their consultation, or to work out a co-operative arrangement. Many employers expressed their satisfaction with local vocational programs and commented that programs should "keep up the good work." Several commented that vocational education was the only program that truly served the needs of students and the business community.

CONCLUSIONS AND RECOMMENDATIONS

Results of the survey of South Carolina employers reiterated some of the same "themes" that have emerged in other studies and forums involving employers and industry representatives. These themes include: concern about what is perceived as a decline in the traditional work ethic, the expressed need for closer industry-education ties, reports of the rapid and pervasive introduction of computers and other automation devices into all industries, and concerns about basic academic skill deficiencies that hinder job performance and limit an employee's ability to profit from further training.

Although basic academic skills have been a major concern of recent study panels and school reform legislation, this issue did not emerge as paramount for employers. Also, according to the results of this study, employers do not seem to be as concerned with specific job skills as with the declining work ethic and the lack of understanding about business needs and goals. In addition to good work habits, it is training in basic areas -- communicating, relating to others, reasoning -- that employers want. They are willing to do more of the job-specific training.

The increased concern about work behaviors and ethics does not neccesarily mean that either specific job skills or sound academic skills are unimportant. Rather, it seems to be the result of changes in social values that have shifted the emphasis from work to personal fulfillment as a central life goal. Unfortunately, this value shift has occurred at a time in the nation's economic development when productivity, efficiency, and economic competitiveness have become more important. The result is that employers are calling on schools to play a larger role in the development of productive work behaviors and attitudes that traditionally have been instilled through social and family influences.

Overall, employers see the strengths of vocational education as: good preparation of graduates (particularly in the manufacturing sector) with regard to skills and reduced need for OJT, the provision of educational options for non-college bound students, and better preparation of high school graduates for the "world of work." Areas that need to be strengthened include: expansion of programs in some areas, systematic emphasis on good work habits and behaviors, improvement of vocational education's image in order to attract more capable students, closer contact with employers, and greater attention to instruction in the concepts and business practices of the free enterprise system.

CONCLUSIONS

On the basis of the results of the survey, as well as the comments provided by employers, business leaders, and educators during state-wide forums, the following conclusions were drawn.

* Since employers were not asked to make comparisons between employees who had been vocationally trained and those who had not, many of their responses related to all high school graduates. This suggests that certain pre-employment competencies and life/work behaviors are expected of all new workers, and that employers are increasingly expecting these skills and behaviors to be taught in the public school system.

* Employers do not seem to expect fully-trained employees who can start a job without missing a beat so much as they want good, solid workers who can take advantage of specialized on-the-job training and re-training. The exceptions are that employers expect secretaries, skilled crafts people (mechanics, carpenters, plumbers, etc.), and some types of service workers to have specific job skills prior to employment.

* Most employers provide some OJT, but there is considerable variability in the type and length of training. In some industries (e.g., service industries such as food and beverage, retail sales, etc.), specific skills may be less important than employability skills training.

* There is a shortage of skilled crafts people in the construction trades, and expressed dissatisfaction among these employers regarding the quality of current entry level workers. Part of this problem may be that salary levels for job entrants in the construction industry are relatively low. Also, fluctuations in job opportunities in the construction industry may seriously affect the ability of programs to attract career-minded students.

* The most preferred worker characteristics were a) good work habits, b) interpersonal skills, c) job specific skills, and d) prior work experience. Basic academic skills ranked low, in comparison to others listed, but strongly worded comments from employers indicated this is an area of serious concern. Also, there was variability across industries with regard to preferred characteristics.

* Low levels of employer participation and involvement were reported in the areas of program (course) content, active recruitment of students, co-operative education arrangements, and communication of needs to educators. This was particularly true for small businesses.

* In general, employers feel secondary vocational education should be a) encouraging good work habits, b) providing job training for non-college bound students, c) teaching the application of basic skills in various occupations, and d) helping students find appropriate careers.

* Employers feel that the best way to judge vocational program effectiveness is through a) employer satisfaction with vocationally trained workers, b) training-related placements, and c) responsiveness to local labor needs. However, employer satisfaction is not currently a part of the evaluation process for vocational education.

* Nearly half of all employers surveyed received some direct benefit from vocational programs, usually because they hired and were satisfied with graduates. This was particularly true in manufacturing. Another one fourth were not able to benefit, for reasons that are outside the control of vocational education (e.g., limited hiring, age restrictions). However, for one fourth of the employers surveyed, benefits could be increased if specific types of workers were being prepared or if employers were better informed about programs and students.

* Many employers felt they would be better served through closer ties (better communication, regular information exchange) with vocational programs, by being provided with workers who have good work habits and sound academic basics, and by the provision of specific programs not currently offered.

* "Computers" emerged as the most frequently cited development, impacting on all fields from business to forestry. Also cited as a relatively pervasive development was the growing use of automated equipment and electronic controls which will require upgraded skills, as well as technicians trained to repair this equipment.

* Considerable variation was found in the needs, interests, and perceptions of different groups of employers (by industry, size, location). These differences have important implications for vocational programs in terms of the clusters of skills and abilities that might be emphasized in various occupational training programs.

RECOMMENDATIONS

These overall conclusions, based on the analysis of employer responses to structured survey items, as well as written comments to open-ended questions, led the Council to propose the following recommendations.

1) The potential role of vocational education in providing pre-employment education for all high school students should be explored. This issue will be more fully addressed in the Council's final report of summary recommendations.

2) Employability skills training, which includes good work habits, cognitive and interpersonal development, job seeking, an understanding of the free enterprise system, and career awareness, should be made a systematic part of the vocational curriculum. Although these skills are not as measurable as academic or specific skill attainment, and perhaps more difficult to teach, they are critical to life and work, and must be emphasized as an important part of the educational process.

3) Vocational programs should increase employer involvement in the design of certain program content (particulary in developing work-related instructional materials), recruitment of students into high demand fields, the development of co-operative programs, and the regular assessment of labor needs and job skill requirements. Program advisory councils should receive increased emphasis, meet on a regular basis, and include a wider range of business representatives (e.g., current employers of vocational graduates as well as potential employers, new and small businesses, etc.) Relatively frequent rotation of advisory council membership is also necessary to ensure that a variety of inputs are obtained, and that new business representatives are informed about vocational programs on a regular basis.

4) Employer satisfaction with graduates, responsiveness to local labor needs, and industry-education awareness should be important components of the program evaluation process. It is not necessary that these factors be assessed in a scientifically rigorous way, but some evidence of community awareness, employer satisfaction, and local industry input should be systematically required of all occupational programs. This communication should not be a one-way street; employers must be provided with information that will increase their understanding of educational program content, purposes, and intended outcomes as well.

5) Vocational programs must make a more systematic attempt to identify the cluster of skills and abilities that employers expect in various occupations, and those which are more efficiently developed on the job by employers.

6) For those industries in which on-the-job training is the most efficient form of preparation (e.g., some service industries such as food and beverage, retail sales, small businesses, etc.), alternative evaluation criteria, other than training-related placement, should be considered. Also, co-operative education should be emphasized as the preferred training approach in these cases.

7) Increased attention should be given to the needs of small businesses. Advisory councils should identify the training needs of small firms and see how vocational programs can help meet them. Also, schools must take the initiative in contacting small businesses, particularly on an informal, person-to-person basis. Factors that are currently serving as barriers to the development of co-operative programs with small businesses should be identified and remedied where possible.

8) Vocational education should develop an employer-oriented promotional strategy designed to better "sell" its students to local industries. This campaign should focus on vocational education's ability to prepare graduates who: a) take pride in work performed and are conscientious of work responsibilities, b) have the ability to work with others and have a favorable attitude toward employers, c) come to the job with skills, practical experience, and a good knowledge of what the job entails, and d) are capable of benefiting from employer specific training because they have good basic skills.

9) All occupational programs should focus attention on the impact of automation, computers, and electronics, as they are being introduced in various industries and occupations. Specific technological developments in various industries should be periodically assessed and incorporated into programs to the extent possible.

10) State government should provide the support necessary for vocational education to maintain and/or improve its own "adaptability" in the face of dramatic economic and technological changes. Flexibility is needed in the development of industry-education relationships, program design, training delivery, and assessment criteria if vocational education is to better meet the needs of various businesses and industries. This flexibility is even more important in light of the diversity among industries with regard to job requirements -- some employers need workers with highly specific job skills while others require more generic employability skills.

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APPENDIX A: COURSES OR PROGRAMS SUGGESTED BY EMPLOYERS

Appliance Repair
Blueprint Reading
Business Management
Child Behavior Management
Commercial Electricity
Computers
Construction Equipment Repair
Culinary Arts
Custodial Services
Diesel Mechanics
Electrical Codes
Electricity
Electronics (for auto mechanics)
Flooring Installation
Health Fields
Housing Rental/Maintenance
Industrial Maintenance
Laboratory Technology
Landscaping
Logging and Forestry
Motorcycle Repair
Pest Control
Plastics Processing
Production Machine Operation
PVC Plumbing
Salesmanship
Sewing Machine Repair
Sheet Metal
Teacher Assisting
Tile (soft and hard) Setting
Tourism
Wordprocessing

APPENDIX B: SPECIFIC TYPES OF WORKERS NEEDED

Air Conditioner Repairers
Brick Masons
Carpenters (general)
Chemical Laboratory Workers
Computer Operators
Concrete Finishers
Concrete Form Workers
Diesel Mechanics
Electronics Repairers
Form Carpenters
Hydraulics Mechanics
Industrial Pipefitters
Interior Decorators (trainees)
Machinists
Meat and Produce Managers
Painters
Production Machine Operators
Robot Mechanics
Teacher Aides
Tile Setters
Truck Drivers
Wallpaper Hangers
Water/Waste Water Plant Operators

APPENDIX C: A CROSS-SECTION OF ADDITIONAL EMPLOYER COMMENTS

"Vocational education should be education about vocations and careers because of the diversity of job opportunities today. High schools should teach thinking, reasoning, and adaptability, while higher education focuses on the development of job skills. Also, all high school students should take vocational education." (School Official)

"We move rapidly in the auto service industry. The post-1980 cars are not receiving proper service because of lack of skills and high cost of repairs. We need better trained technicians to reduce repair costs through better problem diagnosis." (Automotive Service Manager)

"Today's employees don't realize how much it costs to run a business. They should be taught to respect the business that pays their salary. Today's kids don't take their jobs seriously." (Retail Owner)

"We can and must teach more at the high school level and reduce duplication between vocational centers and TEC. Otherwise, students waste time and taxpayers waste money. Define each institution's mission." (Manufacturer)

"Our school system has a long way to go. It must get back to the basics and get up-to-date on the latest teaching methods used in other areas of the country. Also, get tougher about passing students." (Personnel Director)

"Too many high school students lack basic skills. A high school diploma doesn't seem to mean anything any more." (Personnel Manager)

"Why not incorporate (into vocational education) some basics of holding down a job for all high school seniors? Many students never work while in high school. After graduation the 'big world' hits them. Bring some practical things into education -- let them know what to expect." (Retail Manager)

"Vocational education is being used as a place to put problem kids, not as a true training center for needed skills." (Agency Director)

"Existing vocational programs don't seem to attract the better students. Mostly they get lower level students who should have had better basic skills education in grammar school and high school." (Restaurant Manager)

"Give students aptitude tests before placing them in vocational classes or recommending certain fields to them. Recommendations should be based on grades, ability, and attitude." (Office Manager)

"Vocational instructors tend to teach skills without visiting the 'market place' and this approach is unrealistic. Students expect more. Schools should hold seminars with business people to get their input." (Service Agency Director)

"Locally we need some cooperation between vocational centers, industrial development boards, and manufacturers. Presently they function as separate entities." (Manufacturer)

"We have a constant problem of poor attendance and punctuality. These work habits are very important, but it has been difficult to find employees with these traits." (Personnel Manager)

"If, during the course of education, a student does not learn to think, and does not learn self-discipline, then no training program is going to help them be a successful part of any business." (Sales and Service Manager)

"I get the feeling vocational classes are loaded down with disinterested students. We don't pay enough to attract good teachers who will be good role models and maintain high levels of enthusiasm and interest." (Wholesaler)

"There is a strong need for quality technical courses at the high school level. Emphasis should be on preparing students for the future, whether it be college or a trade. We still need employees who can use their hands to make a living." (Manufacturer)

"We need skilled crafts people and we can keep them working year round. Unfortunately, most of the applicants are not only unskilled, but very difficult to train on the job because they lack basic reading and math skills." (Contractor)

"In general, crafts people do not need a college education to earn a comfortable living. Vocational training provides a much-needed tool for those who don't want to or can't continue their education after high school." (Contractor)

"The state could help industry by giving an incentive for people to get off welfare, thus strengthening the work ethic in the home, and strengthening families." (Personnel Manager)

"The stiffer graduation requirements are going to put many young people in the streets without a high school diploma. Vocational programs are the solution for students who are less capable academically. Please work quickly to promote vocational education." (Contractor)

"A greater variety of service skills should be taught for non-college bound people. Also, vocational education should begin at the junior high school level. Don't wait until grade 10 or 11 when the 'drop out syndrome' has already begun." (Educator)

"Vocational training at the adult level (evenings) is important for upgrading skills and introducing people to new and emerging technologies that impact their present employment." (Service Agency Director)

"I have served on advisory councils for vocational programs and I am impressed with the vocational departments." (Realtor)